WHAT IS CLAIMED IS:

1. A method for the preparation of 4,4'-diisopropylbiphenyl, said method comprising:

(a) continuously contacting in a flow reactor (i) biphenyl, (ii) at least one inert solvent, (iii) propene, and (iv) an inert diluent gas, said flow reactor containing at least one solid acidic catalyst, said contacting being conducted at a pressure greater than about 1 atmosphere and at a temperature greater than 180°C; and

(b) continuously recovering an effluent steam comprising product 4,4'-diisopropylbiphenyl, inert solvent, and inert diluent gas.

2. A method according to claim 1 wherein said solid acid catalyst is selected from the group consisting of acidic zeolites of type A, X, Y, USY and ZSM-5.

3. A method according to claim 1 wherein said acidic zeolite is a mordenite acidic zeolite.

4. A method according to claim 3 wherein said acidic zeolite comprises SiO_2 and Al_2O_3 structural units, said SiO_2 and Al_2O_3 structural units being present in a molar ratio in a range from about 10 to 1 to about 500 to 1 moles of SiO_2 structural units to moles of Al_2O_3 structural units.

5. A method according to claim 1 wherein the biphenyl is continuously contacted with the solid acidic catalyst at a weight hourly space velocity (WHSV) of between about 0.025 hr^{-1} and about 10 hr^{-1}.

6. A method according to claim 5 wherein said weight hourly space velocity (WHSV) is in a range between about 0.1 and about 2.5 hr^{-1}.

7. A method according to claim 1 wherein said inert solvent has a boiling point in a range between about 180°C and about 320°C.

8. A method according to claim 7 wherein said solvent is a saturated hydrocarbon.

9. A method according to claim 1 wherein said propene is present in an amount corresponding to between about 0.1 mole and about 10 moles of propene per mole of biphenyl.

10. A method according to claim 9 wherein said propene is present in an amount corresponding to between about 2 and about 5 moles of propene per mole of biphenyl.

11. A method according to claim 1 wherein said diluent gas is selected from the group consisting of nitrogen, helium, argon, and carbon dioxide.

12. A method according to claim 1 wherein said diluent gas is nitrogen.

13. A method according to claim 1 wherein said contacting is conducted at a pressure in a range between about 1 atmosphere and about 100 atmospheres.

14. A method according to claim 13 wherein said contacting is carried out at a pressure in a range between about 2 atmospheres and about 40 atmospheres.

15. A method according to claim 1 wherein said contacting is carried out at a temperature in a range between about 180°C and about 320°C.

16. A method according to claim 15 wherein said contacting is carried out at a temperature in a range between about 200°C and about 250°C.

17. A method according to claim 1 wherein said biphenyl and said inert solvent are continuously contacted with said acidic catalyst at a feed rate corresponding to between about 0.1 and about 5 catalyst bed volumes per hour.

18. A method according to claim 17 wherein said feed rate corresponds to between about 1 and about 3 catalyst bed volumes per hour.

19. A method for the continuous preparation of 4,4'-diisopropyl biphenyl, said method comprising:

(a) continuously introducing into a flow reactor containing a solid bed of an acidic zeolite catalyst at a temperature in a range between about 180°C and about 320°C and a pressure between about 2 and about 50 atmospheres, (i) a solution

comprising biphenyl and at least one inert hydrocarbon solvent, (ii) propene, and (iii) an inert diluent gas, said solvent having a boiling point in a range between about 180°C and about 320°C, said solution being introduced into said flow reactor at a feed rate corresponding to about 0.1 to about 5 catalyst bed volumes per hour, said propene being introduced at a feed rate corresponding to between about 1 and about 10 moles of propene per mole of biphenyl; and

(b) continuously removing from the flow reactor an effluent steam comprising product 4,4'-diisopropylbiphenyl, inert hydrocarbon solvent, and inert diluent gas.

20. A method according to claim 19 wherein said acidic zeolite catalyst comprises SiO_2 and Al_2O_3 structural units, said SiO_2 and Al_2O_3 structural units being present in a molar ratio in a range from about 20 to 1 to about 500 to about 1 moles of SiO_2 structural units to moles of Al_2O_3 structural units.

21. A method according to claim 20 wherein the biphenyl is continuously contacted with the acidic zeolite catalyst at a weight hourly space velocity (WHSV) of between about 0.025 to about 10 hr^{-1}.

22. A method for the continuous preparation of 4,4'-diisopropylbiphenyl, said method comprising:

(a) continuously introducing into a flow reactor containing a solid bed of an acidic zeolite catalyst at a temperature in a range between about 200°C and about 250°C and a pressure between about 10 and about 30 atmospheres, (i) a solution comprising biphenyl and decalin, (ii) propene, and (iii) nitrogen gas, said solution having a concentration of biphenyl in a range between about 0.1 and 1.0 moles of biphenyl per liter of solution, said solution being introduced into said flow reactor at a feed rate corresponding to between about 0.1 and about 5 catalyst bed volumes per hour, said propene being introduced at a feed rate corresponding to between about 1 and about 10 moles of propene per mole of biphenyl; and

(b) continuously removing from the flow reactor an effluent steam comprising product 4,4'-diisopropylbiphenyl, decalin, and nitrogen gas.